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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/541,765

04/03/2000

Mareike Klee

PHD 99.046

4722

7590

08/12/2002

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EXAMINER

THOMAS, ERIC W

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 08/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/541,765

Applicant(s)

KLEE ET AL.

Examiner

Eric W Thomas

Art Unit

2831



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Prosecution Application

1. The request filed on 6/7/02 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/541,765 is acceptable and a CPA has been established. An action on the CPA follows.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 6, the limitation "at least one thin film dielectric" is vague and indefinite. The examiner is not sure what is meant by "thin". Applicant points to two examples in the specification wherein the dielectric layers are 0.75 μm and 0.25 μm . Can the at least one dielectric have a thickness of greater than 0.75 μm (please note this also appears in claim 10)?

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

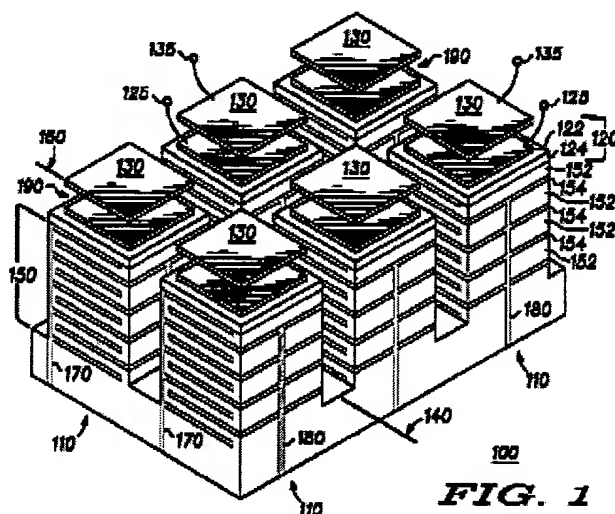
A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Art Unit: 2831

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 11, 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Malone et al. (US 6,088,214).



Regarding claim 11, Malone et al. disclose in fig. 1, a ceramic passive component (100) comprising a carrier substrate (col. 9 lines 40-45, col. 1 lines 35-37); one first electrode (154) formed of a metal and having a first surface disposed on the substrate, a dielectric (152) having a first surface disposed, on a second surface of the first electrode opposing the first surface of the first electrode and a second electrode (154, 122 & col. 2 lines 39-48), disposed on a second surface of the dielectric opposing the first surface of the dielectric, wherein the dielectric is a ferroelectric ceramic with a

Art Unit: 2831

voltage-dependent relative dielectric constant (see abstract materials). Malone et al. disclose the claimed invention but do not expressly state that the passive component is used in a delay line. The recitation "a delay line" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Regarding claim 12, Malone et al. disclose a use of a ceramic passive component (100) which comprises: a carrier substrate, a first electrode (154) comprising a metal having a first surface disposed on a substrate, a dielectric layer (152) having a first surface disposed on a second surface of the first electrode, a second electrode (154) disposed on a second surface of the dielectric layer, and said dielectric comprises a ferroelectric ceramic material with a voltage dependent relative dielectric constant (see abstract & col. 3 lines 28-36).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10, as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Malone et al. (US 6,088,214).

Regarding claims 1, & 10, Malone et al. disclose in fig. 1, a ceramic passive component (100) comprising a carrier substrate (col. 9 lines 40-45, col. 1 lines 35-37); one first electrode (154) formed of a metal and having a first surface disposed on the substrate, a dielectric (152) having a first surface disposed, on a second surface of the first electrode opposing the first surface of the first electrode and a second electrode (154, 122 & col. 2 lines 39-48), disposed on a second surface of the dielectric opposing the first surface of the dielectric, wherein the dielectric is a ferroelectric ceramic with a voltage-dependent relative dielectric constant (see abstract materials). (Regarding claim 10, the ceramic passive component can be used in a filter (col. 1 lines 30-40)).

Malone et al. disclose the claimed invention except for the thickness of the at least one dielectric layer. It would have been an obvious matter of design choice to form thin dielectric layers since such a modification would have involved a mere change

in the size of a component. Where the instant specification and evidence of record fail to attribute any significance (novel or unexpected results) to a particular size, a change in size is generally recognized as being within the level of ordinary skill in the art. *In re. Rose*, 105 USPQ 237 (CCPA 1955).

Regarding claim 2, Malone et al. disclose the ferroelectric ceramic material with a voltage-dependent dielectric constant is a $\text{Pb}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$ wherein x varies from 0 to 1 (abstract).

Regarding claim 3, Malone et al. disclose the second electrode (152, 122 & col. 2 lines 39-48) discloses first (152) and second (122 (without 124 –see col. 2 lines 39-48)).

Regarding claim 4, Malone et al. disclose the claimed invention (see above in claim 3), except for the first conducting layer being formed from Titanium. Titanium is a well-known material used as electrodes in the art. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the first electrically conducting layer of the component of Malone et al. from a titanium material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claim 5, Malone et al. disclose the second electrically conducting layer (122) comprises a metal.

Regarding claim 6, Malone et al. disclose the claimed invention except for the substrate is formed from a ceramic material. Substrates formed from ceramic materials are well known in the art. It would have been obvious to a person of ordinary skill in the

Art Unit: 2831

art at the time the invention was made to form the substrate of the component of Malone et al. from a ceramic material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 7, Malone et al. disclose the claimed invention except for the dielectric being formed from multiple layers. Forming a dielectric from multiple layers is well known in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the dielectric from multiple layers, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

Regarding claim 8, Malone et al. disclose the claimed invention. Although Malone et al. do not expressly disclose "a protective layer is laid over the entire of the component", the component inherently has a protective element surrounding the entire component (i.e. a housing) to protect the system from the external environment.

Regarding claim 9, Malone et al. disclose the claimed invention (as seen above in claim 1) but do not expressly state that the passive component is used in a voltage-controlled oscillator. The recitation "a voltage-controlled oscillator" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural

limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Response to Arguments

1. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "at least one thin film" (claims 11-12)) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

6,225,250 – discloses capacitor having at least one thin dielectric layer formed from the process as seen in Malone et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric W Thomas whose telephone number is (703) 305-0878. The examiner can normally be reached on Mon & Sat 9:00 AM - 9:30 PM; Tue-Fri 5:30PM-10:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 703-308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

ewt
July 29, 2002

Dean A. Reichard 8/8/02
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